

CSI Program Forum

June 19, 2014

11:00 AM – 12:00 PM

Webinar – Based Forum



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Agenda

- **Welcome and Introductions**
- **CSI General Market Updates**
 - SCE CSI Program Status
 - CCSE CSI Program Status
 - PG&E CSI Program Status
- **Regulatory Update**
- **PBI PTM Update**
- **CSI Q&A**
- **Closing**



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CSI General Market Program Updates



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SCE CSI Program Status Robert Wright



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CSI Remaining Budget

1. Ordering Paragraph 5: Program Achievements Currently Forecasted

		Program Goals		Confirmed		Under Review		Remaining		Program Achievements Currently Forecasted		
		Capacity (MW)	Budget (\$)	Capacity (MW)	Budget (\$)	Capacity (MW)	Budget (\$)	Capacity (MW)	Budget (\$)	Capacity (MW)	Final Step	Portion of Final Step (MW)
PG&E	Residential	252.368	211,628,000	257.883	209,745,498	0.016	12,663	9.329	<u>1,869,840</u>	267.228	10	82.931
	Non-Residential	512.383	666,164,970	508.535	661,232,594	0.000	0	11.149	<u>4,932,376</u>	519.683	10	131.861
	Total	764.750	877,792,970	766.418	870,978,091	0.016	12,663	20.477	6,802,216	786.912	N/A	N/A
SCE	Residential	265.650	222,767,000	318.753	221,011,769	0.002	1,569	8.736	<u>1,753,662</u>	327.491	10	162.661
	Non-Residential	539.350	645,225,600	420.658	579,881,212	52.735	16,769,075	128.468	<u>48,575,313</u>	601.860	10	170.380
	Total	805.000	867,992,600	739.411	800,892,981	52.736	16,770,644	137.204	50,328,975	929.351	N/A	N/A
CCSE	Residential	84.507	54,885,000	76.754	51,594,846	14.968	3,030,005	1.287	<u>260,149</u>	93.009	10	46.692
	Non-Residential	95.743	147,139,430	93.293	138,760,320	1.722	747,446	18.998	<u>7,631,663</u>	114.014	10	18.272
	Total	180.250	202,024,430	170.047	190,355,166	16.691	3,777,451	20.285	7,891,812	207.023	N/A	N/A
TOTAL	Residential	602.525	489,280,000	653.390	482,352,113	14.986	3,044,237	19.352	3,883,650	687.728	N/A	N/A
	Non-Residential	1,147.475	1,458,530,000	1,022.487	1,379,874,125	54.457	17,516,521	158.614	61,139,353	1,235.558	N/A	N/A
	Total	1,750.000	1,947,810,000	1,675.876	1,862,226,239	69.443	20,560,758	177.967	65,023,003	1,923.286	N/A	N/A

Source: www.californiasolarstatistics.ca.gov, data as of 6/12/14



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SCE Program Status and Remaining Budgets

- SCE Residential Status – **On-Hold** - No available remaining incentive Dollars
 - \$1,234,916 Wait List
 - \$1,569 Under Review
 - \$221,007,422 Confirmed
- SCE Non-Residential Status – **Active (Step 10)**
 - \$48,872,361 Remaining
 - \$15,446,015 Under Review
 - \$580,907,224 Confirmed

Source: www.californiasolarstatistics.ca.gov, data as of 6/17/14

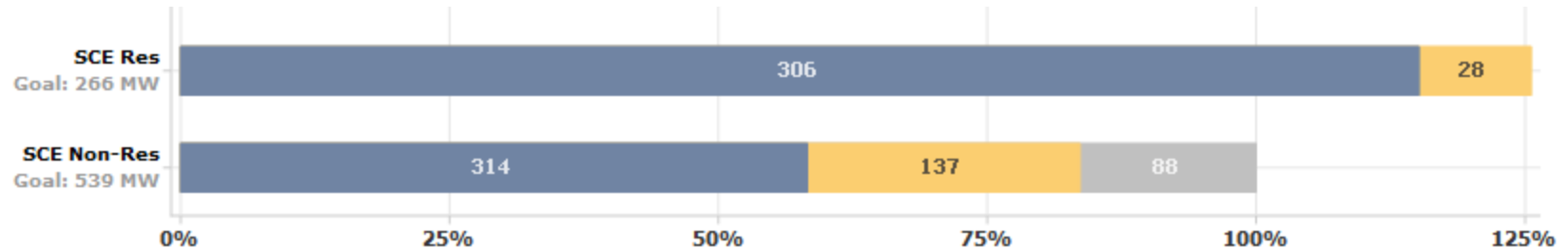


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SCE MW Goals



- **SCE Residential MW Goal:**
 - Goal 266 MW
 - 305.8 MWs Installed
 - 27.7 MW in Applications (does not include Wait List)
 - 0 MW Remaining
- **SCE Non-Residential MW Goal:**
 - Goal 539 MW
 - 314.3 MWs Installed
 - 136.7 MW in Applications
 - 88.4 MW Remaining

Source: www.californiasolarstatistics.ca.gov, data as of 6/12/14



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CCSE CSI Program Status Alexandra Patey



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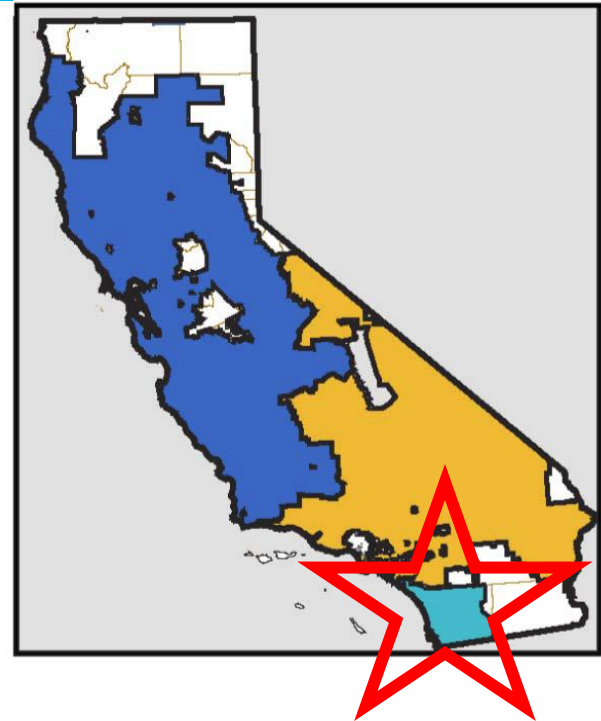


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CCSE - CSI Program Update

June 19, 2014

- Residential Program
- Non-Residential Program
- Additional Program Updates



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CCSE Residential Program

- Capacity Goals:

- To install 84.5 MW of solar photovoltaics on single-family homes from 2007-2016

- Capacity Reached:

- Installed 76.6 MW of solar photovoltaics on single-family homes from 2007-present
- Forecasted 94.9 MW (includes 'Pending' and 'Installed' applications) from 2007-2016

- Current funding status:

- February 14, 2014, the Residential Program in the SDG&E territory exhausted its funding
 - Waitlist opened Feb. 14, 2014
 - Waitlist closed April 11, 2014



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CCSE Residential Daily Budget Report

This table shows the remaining budget and history of this program for the last 20 business days.

This report is updated daily Monday through Friday and quarterly. The dates displayed represent the budget values at the close of business for a given day. This report is current as of close of business on 6.16.14

Please Note: CSI projects which are waitlisted are not guaranteed an incentive. See footnotes below for more information.

Report Date	Daily Budget Values				Change from Previous Day			
	Confirmed ¹ (\$)	Under Review ² (\$)	Remaining Funds ³ (\$)	Wait List ⁴ (\$)	Confirmed ¹ (\$)	Under Review ² (\$)	Remaining Funds ³ (\$)	Wait List ⁴ (\$)
Monday, June 16, 2014	51,630,888	2,994,037	260,075	1,230,744	12,285	(12,324)	39	0
Friday, June 13, 2014	51,618,603	3,006,361	260,036	1,230,744	6,662	(6,903)	241	0
Thursday, June 12, 2014	51,611,941	3,013,264	259,795	1,230,744	17,095	(16,741)	(354)	0
Wednesday, June 11, 2014	51,594,846	3,030,005	260,149	1,230,744	9,154	(9,224)	70	0
Tuesday, June 10, 2014	51,585,692	3,039,229	260,079	1,230,744	1,374	(1,396)	22	0
Monday, June 9, 2014	51,584,318	3,040,625	260,057	1,230,744	904	(1,060)	156	0
Friday, June 6, 2014	51,583,414	3,041,685	259,901	1,230,744	13,188	(13,188)	0	0
Thursday, June 5, 2014	51,570,226	3,054,873	259,901	1,230,744	19,730	(20,903)	1,173	0
Wednesday, June 4, 2014	51,550,496	3,075,776	258,728	1,230,744	3,428	(3,470)	42	0
Tuesday, June 3, 2014	51,547,068	3,079,246	258,686	1,230,744	6,082	(6,532)	450	0
Monday, June 2, 2014	51,540,986	3,085,778	258,236	1,230,744	23,095	(24,339)	1,244	0
Friday, May 30, 2014	51,517,891	3,110,117	256,992	1,230,744	13,944	(14,159)	215	0
Thursday, May 29, 2014	51,503,947	3,124,376	256,777	1,230,744	25,780	(25,802)	402	0

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CCSE Non-Residential Program

- Capacity Goals:

- To install 95.7 MW of solar photovoltaics on single-family homes from 2007-2016

- Capacity Reached:

- Installed 70.4 MW of solar photovoltaics on single-family homes from 2007-present

- Current funding status:

- Remaining Funds equates to \$7,339,622
- Currently in Step 9b
 - EPBB - Commercial: \$0.25/Watt / EPBB – Gov't/Non-Profit: \$0.90/Watt
 - PBI – Commercial: \$0.032/kWh / PBI – Gov't/Non-Profit: \$0.114/kWh
- 8.77 MW remaining in Step 9



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CCSE Non-Residential Daily Budget Report

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Please Note: CSI projects which are waitlisted are not guaranteed an incentive. See footnotes below for more information.

Report Date	Daily Budget Values				Change from Previous Day			
	Confirmed ¹ (\$)	Under Review ² (\$)	Remaining Funds ³ (\$)	Wait List ⁴ (\$)	Confirmed ¹ (\$)	Under Review ² (\$)	Remaining Funds ³ (\$)	Wait List ⁴ (\$)
Tuesday, June 17, 2014	139,006,276	793,532	7,339,622	0	(18,258)	273,255	(254,997)	0
Monday, June 16, 2014	139,024,534	520,277	7,594,619	0	(626)	0	626	0
Friday, June 13, 2014	139,025,161	520,277	7,593,992	0	267,117	(266,927)	(190)	0
Thursday, June 12, 2014	138,758,043	787,205	7,594,182	0	(2,277)	39,758	(37,481)	0
Wednesday, June 11, 2014	138,760,320	747,446	7,631,663	0	0	15,118	(15,118)	0
Tuesday, June 10, 2014	138,760,320	732,329	7,646,781	0	0	0	0	0
Monday, June 9, 2014	138,760,320	732,329	7,646,781	0	(55)	326,458	(326,403)	0
Friday, June 6, 2014	138,760,375	405,871	7,973,184	0	613,687	(613,687)	0	0
Thursday, June 5, 2014	138,146,688	1,019,558	7,973,184	0	0	0	0	0
Wednesday, June 4, 2014	138,146,688	1,019,558	7,973,184	0	55,609	(33,658)	(21,951)	0
Tuesday, June 3, 2014	138,091,079	1,053,216	7,995,135	0	4,832	0	(4,832)	0
Monday, June 2, 2014	138,086,247	1,053,216	7,999,967	0	(292,218)	71,456	220,762	0
Friday, May 30, 2014	138,378,465	981,760	7,779,205	0	0	0	0	0
Thursday, May 29, 2014	138,378,465	981,760	7,779,205	0	(226,511)	4,805	221,706	0
Wednesday, May 28, 2014	138,604,975	976,955	7,557,499	0	5,877	(5,877)	0	0
Tuesday, May 27, 2014	138,599,098	982,832	7,557,499	0	84,964	(79,087)	(5,877)	0
Monday, May 26, 2014	138,514,135	1,061,919	7,563,376	0	0	0	0	0

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Additional Updates

- CCSE continues to focus on Marketing and Outreach efforts
 - Hosting Solar Home Tours
 - Teaching educational solar workshops
 - Contractor “Meet and Greet”
 - Providing Site-Assessment Tool Lending Library
 - Site Assessment and Shade Analysis consulting
 - Residential/Non-Residential Case Studies



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PG&E CSI Program Status Brittany Moore



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PG&E Program Status and Remaining Budgets

- PG&E Residential Status – **Closed as of 5/2/13**
 - \$831,042 Wait List
 - \$0 Under Review
 - \$209,745,498 Confirmed
- PG&E Non-Residential Status – **Closed as of 12/12/13**
 - \$32,288,946 Wait List
 - \$4,768,723 Remaining
 - \$0 Under Review
 - \$661,232,594 Confirmed

Source: www.californiasolarstatistics.ca.gov, data as of 6/17/14

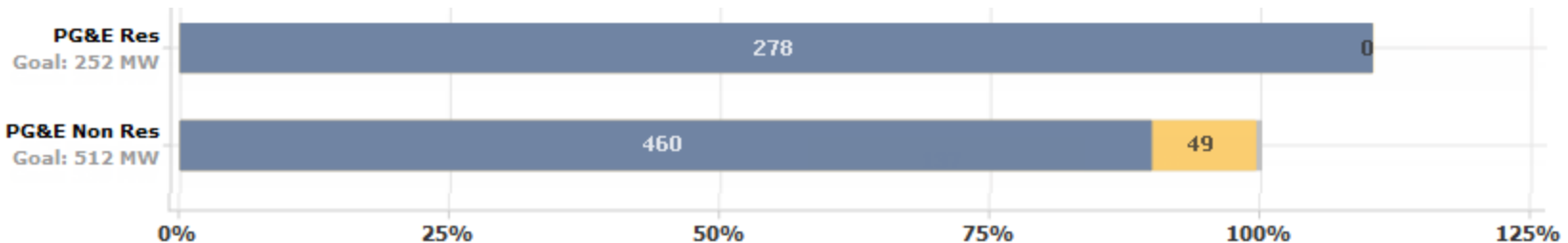


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PG&E MW Goals



- **PG&E Residential MW Goal:**
 - Goal 252 MW
 - 278.1 MWs Installed
 - 0.2 MW in Applications
 - 0 MW Remaining
 - **PG&E Non-Residential MW Goal:**
 - Goal 512 MW
 - 460.1 MWs Installed
 - 49.3 MW in Applications
 - 3 MW Remaining
- *Will be removing projects off of the Non-Residential Waitlist

Source: www.californiasolarstatistics.ca.gov, data as of 6/12/14



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Regulatory Update

James Loewen

CPUC Energy Division

- Market Assessment Studies Released
- Distributed Generation Proceeding Scoping Memo Released
- NEM Treatment for Batteries
- Low Income Program Extension per AB 217



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CSI Market Assessment Studies Released

Navigant consulting has completed the three-part study:

1. Third-Party Ownership Market Impact Study
2. CSI Market Transformation Study
3. Solar PV and Residential Roof Study:
Assessment of Interface Issues and Costs



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Distributed Generation Proceeding Scoping Memo Released

Tees up CSI and other DG (distributed generation) topics:

- CSI (general market and low-income), CSI-Thermal, RD&D, SGIP
- Post-CSI market support (e.g. data publication, consumer protections)
- NEM evolution.



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Batteries and NEM Eligibility Decision (D.14-05-033)

- Eases interconnection of energy storage on customer side of the meter.
- If energy storage is paired with NEM-eligible gen facilities, then it can receive NEM treatment (exempt from various fees and charges)



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Low Income Program Extension per AB 217

AB 217 signed in October 2013:

- Adds \$108 million (new funds) for low income programs.
- Capacity goal of 50 MW.
- Extends low income programs (MASH and SASH) through 2021.

CPUC implementation:

- Energy Division staff proposal next couple of months.
- Proposed decision expected Q4 2014.



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PBI Petition To Modify Alexandra Patey



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PBI Acceleration Proposal



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Background

- D.06-08-028 (August 24, 2006), the CPUC determined:
The basic rationale for a PBI structure is to ensure that ratepayer subsidies for solar are paid based on effective system design, installation, and ultimately on performance, and not simply the rated capacity of the physical components.
- Customers with larger systems have an inherent incentive to police the performance of their systems because of the large capital investments associated with their system installation.
- A PBI acceleration scheme will uphold the original rationale of a performance-based incentive program, while also making it more cost-effective for the Program Administrators to carry out the program.



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Proposal Reasoning

- **Disconnect between CSI program sunset date 2016 and PBI sunset date 2024**
 - Proposal will reduce administrative costs for PBI payment processing
- **Budget uncertainty**
 - Proposal will ensure project payments stay within estimated performance parameters while still rewarding high performing systems.



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Key Terms	
<u>PCD</u>	Program Change Date
<u>New Application</u>	Any PBI project that has not yet reached month 24 of their reporting timeline, as of the PCD
<u>Existing Application</u>	Any PBI project that is between reporting months 25-48, as of the PCD.
<u>Mature Application</u>	Any PBI project that has reached [minimum] reporting month 49, as of the PCD.
<u>Actual Production</u>	The actual performance, in kWh, reported by the system
<u>Estimated Production</u>	The expected performance of the PV system, in kWh, generated by the EPBB Calculator
<u>OPF</u>	Overproduction Factor
<u>Remaining kWh</u>	The total number of kWh we will 'buyout', which excludes any production data previously incentivized.

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Current PBI Protocol

- **Reporting Duration:** 60 months
- **Payment Process:** Program Administrator pays out, monthly, on actual production (no cap)
- **Project Closeout:** 60th month reached, PBI timeline complete



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Accelerated

Protocol

All applications will be categorized into the appropriate sector

- New → Continue reporting until 24th month, then begin the Expedited Buyout Process
- Existing → Stop reporting, and begin the Expedited Buyout Process
- Mature → Opt-In or Opt-Out to Expedited Buyout Process



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Expedited Buyout Process

Once 24 months of actual production data has been reported...

- The PA will determine the OPF for each project, capped at 8%
 - (Details next slide)
- The unique OPF will be applied to the original EPBB estimate
 - (Now referred to as EPBB w/ OPF)
- “Remaining kWh” will be quantified
 - (Details next slide)
- “Remaining kWh” will be ‘bought-out’ via the Lump Sum
 - (Details next slide)



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“OPF” calculation

$OPF = ((Actual\ Production / Estimated\ Production) - 1) \times 100\%$
→ 8% OPF cap will be enforced

“Remaining kWh” calculation

$Remaining\ kWh = EPBB\ (with\ OPF) - Actual\ (kWh\ paid-to-date)$

“Lump Sum Buyout” calculation

$Lump\ Sum\ Buyout = Remaining\ kWh * Reserved\ incentive\ rate$



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Sample Closeout Calculation

PCD approaches, and an “Existing” application is funneled into the Expedited Buyout Process.

- Confirmed incentive rate of \$0.22/kwh @ Step 5
- The **EPBB** estimate is 500,000 kwh over 5 years
(100,000 kwh/year)
- **Actual** 24 month production of 220,000 kwh
- **The calculated OPF** for this project would be
 $(220,000 / 200,000) = 1.1 \rightarrow 10\% \text{ OPF}$
 - 8% cap on OPF



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Sample Closeout Calculation, cont.

Remaining kWh =

(EPBB w/ OPF) – (Total actual kWh production paid-to-date)

For this example,

Remaining kWh = $(500,000 * 108\%) - 220,000$

$= 540,000 - 220,000 = 320,000 \text{ kWh}$

- Thus, we have 320,000 Remaining kWh, compensated at \$0.22 per Kwh.
- PBI Closeout Payment = $320,000 * 0.22 = \$70,400$

*The Lump Sum Buyout for this system would be **\$70,400***

(Lump Sum Buyout + kWh Paid –to –date)

(\$70,400 + \$48,400) = \$118,800 total paid



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A bit of perspective...

- A 6% 'buffer' would have budgeted \$116,600
- An 8% 'buffer' would have budgeted \$118,800
- The current PBI protocol would have paid this project a total of \$121,000
 - This would exceed the budgeted incentive amount for this project by \$2,200 - \$4,400
 - (which does not include admin costs)

Highlighting the fact that a capped, expedited buyout is a necessary change.



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Q&A Panel



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Thank you!

PowerPoint Presentation available at
<http://www.cpuc.ca.gov/PUC/energy/Solar/forum.htm>



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